Texas Parks and Wildlife Department
Wildlife Diversity Program
3000 I-H 35 South Ste. 100
Austin, TX 78704

5/24/00

To John McNurney at RW BECK

From Celeste Brancel-Brown, TPWD

Very briefly, TPWD comments include:

1. Given the small proportion of public versus private land in Texas, the TPWD Biological and Conservation Data System (BCD) includes less than a representative inventory of rare resources in many areas of the state. Although it is based on the best data available to the state regarding rare species, the data from the BCD do not provide a definitive statement as to the presence or absence of rare or threatened and endangered (T&E) species within your project areas; nor can these data substitute for an on-site evaluation by qualified biologists. The BCD information is intended to assist you in avoiding harm to species that may occur on your site.
2. The attached county list identifies, by left margin check mark, species that have known occurrences in the area, and (for birds only) species that would likely use the wooded and riparian corridor. Also included is a description of the Texas Ebony-Anacua Series rare plant community.
3. Please incorporate attached FWS and TPWD guidelines as applicable to your project area
4. Scheduling footprint clearing and tree topping outside of species breeding season to avoid impacting nesting species. If listed species are impacted or identified contact the appropriate authority (e.g. FWS migratory bird treaty program).
5. Reconsider the direct route of across the agricultural field or along the edge of the fields, rather than through the dense wooded habitat. Brownsville and the Lower Rio Grande Valley receive allot of income generated by ecotourism because of the populations and diversity of wildlife that cross through and reside in the area. Extra precautions will need to be taken to ensure the stability of these resources.
6. Mitigate impacts that are unavoidable (seed or replant only **native** grasses). If during construction, the project area is found to contain rare species, their presence should be addressed in a manner to avoid impact to these natural resources.
7. Survey for potential listed threatened and endangered (T&E) species, particularly, Texas Ayenia (*Ayenia limitaris*). US Fish and Wildlife Service should be contacted for guidance and permitting for surveying the project for listed species

Any survey for T&E species should be cognizant of the potential presence of other rare species of Texas flora and fauna. The attached county list can be used as a more inclusive list of species to address. Please provide TPWD the following information about the surveys that are performed for our records: surveyor name, survey method; acreage surveyed; level of effort; weather conditions, time of day, and dates the survey was performed.

TPWD Recommendations for Electrical Transmission Line Design and Construction

Construction of the line should be performed to avoid adverse environmental impact and to restore or enhance environmental quality to the greatest extent practical. In order to minimize the possible project effects upon wildlife, the following measures are recommended:

1. Use wood or non-conducting crossarms to minimize the possibility of electrical contact with perching birds.

2. When possible, install electrical equipment on the bottom crossarm to allow top crossarm for perching.

3. To protect raptors, procedures should be followed as outlined in:
   "Suggested Practices for Raptor Protection on Power Lines, the State of the Art in 1996," by Richard R. Olendorff, A. Dean Miller and Robert N. Lehman; distributed by the Raptor Research Foundation Incorporated, for Edison Electric Institute.
   REA Bulletin 61-10, "Protection of Bald and Golden Eagles from Power Lines."
   USDI-EPA report entitled "Impacts of Transmission Lines on Birds in Flight," (FWS/OBS-78/48).

4. Construction should avoid identified wetland areas. Coordination with appropriate agencies should be accomplished to ensure regulatory compliance. Construction should occur during dry periods.

5. Construction should attempt to minimize the amount of flora and fauna disturbed. Reclamation of construction sites should emphasize replanting with native grasses and leguminous forbs.

6. Existing rights-of-way should be used to upgrade facilities, where possible, in order to avoid additional clearing and prevent adverse impacts associated with habitat loss and fragmentation of existing blocks of wooded habitat.

7. Because forest and woody areas provide food and cover for wildlife, these cover types should be preserved. Mature trees, particularly those which produce nuts or acorns, should be retained. Shrubs and trees should be trimmed rather than cleared.

8. All pole design should be single phase (without arms), where possible, to preserve the aesthetics of the area.

9. Lines should be buried, when practical.

10. Birds typically establish flight corridors along and within river and creek drainages. Transmission lines that cross or are located very near these drainages should have line markers installed at the crossings or closest points to the drainages to reduce the potential of collisions by birds flying along or near the drainage corridors.

11. Line alterations to prevent bird electrocutions should not necessarily be implemented after such events occur, as all electrocutions may not be known or documented. Incorporation of preventative measures along portions of the routes that are most attractive to birds (as indicated by frequent sightings) prior to any electrocutions is much preferred.

12. Transmission lines should be designed to cross streams at right angles, at points of narrowest width, and/or at the lowest banks whenever feasible to provide the least disturbance to stream corridor habitat.

13. Implementation of wildlife management plans along rights-of-way should be considered whenever feasible.

Sweetbay Magnolia Series (G4S4)
(Magnolia virginiana)
This mainly evergreen to mainly low forest occurs over seeps, in wet creek bottoms, and in other permanently moist soils in east Texas. There is considerable north to south variation which has not been well documented. Gallberry holly (Ilex coriacea), black titi (Cyrilla racemiflora), wax-myrtle (Myrica heterophylla), red maple (Acer rubrum), buttonbush (Cephalanthus occidentalis), swamp gum (Nyssa biflora), laurel greenbriar (Smilax laurifolia), possumhaw viburnum (Viburnum nudum), and maleberry (Lyonia *ligustrina) may be components, depending on geographic location and soil reaction. This type is often associated with the sphagnum-beakrush series (bogs), and may be successional to bogs in the absence of fire.

Sycamore-Willow Series (G5S5)
(Platanus occidentalis-Salix nigra)
This broadly defined mostly deciduous strip forest or woodland occupies moist to wet often gravelly soils in periodically scoured creek and river beds across most of the Edwards Plateau and adjacent areas. Sycamore, black willow, and eastern cottonwood (Populus deltoides) are usually present, often as scattered small trees representing growth since the most recent catastrophic flood. A poorly developed shrub layer composed of willow baccharis (Baccharis neglecta), buttonbush (Cephalanthus occidentalis), creek indigo (Amorpha fruticosa) and/or little walnut (Juglans microcarpa) may be present, along with a ground layer that varies widely depending on moisture, stratum, disturbance and other factors.

Texas Ebony-Anacua Series (G2S1)
(Pithecellobium flexicaule-Ehretia anacua)
This evergreen subtropical forest occurs primarily on well-drained but moist river or resaca terraces in the lower Rio Grande valley. Snake-eyes (Phaulothamnus spinescens), coma (Bumelia celastrina), tenaza (Pithecellobium pallens), tepeguaje (Leucaena pulverulenta), colima (Zanthoxylum fagara), brasil (Condalia hookeri), granjeno (Celtis pallida), lotebush (Ziziphus obtusifolia), and mesquite (Prosopis glandulosa) may be important. This type is similar to subtropical shrubland (Texas ebony-snake-eyes series), which occupies drier sites.

Texas Ebony-Snake-eyes Series (G2S2)
(Pithecellobium ebano-Phaulothamnus spinescens)
This subtropical evergreen shrubland or low forest occurs primarily over heavy soils in the lower Rio Grande valley. There is considerable variation with soil type and location, and shrublands on lomas in South Bay are also included as a variant of this series. Coma (Bumelia celastrina), brasil (Condalia hookeri), lotebush (Ziziphus obtusifolia), colima (Zanthoxylum fagara), mesquite (Prosopis glandulosa), and granjeno (Celtis pallida) may be important. This type is closely related to taller Texas ebony-

CAMERON COUNTY

	Federal Status	State Status
***** AMPHIBIANS *****		
Black Spotted Newt (***Notophthalmus meridionalis***) - can be found in wet or sometimes wet areas, such as arroyos, canals, ditches, or even shallow depressions; aestivates in the ground during dry periods; Gulf Coastal Plain south of the San Antonio River		T
Mexican Treefrog (***Smilisca baudinii***) – subtropical region of extreme southern Texas; breeds May-October coinciding with rainfall, eggs laid in temporary rain pools		T
Sheep Frog (***Hypopachus variolosus***) – predominantly grassland and savanna; moist sites in arid areas		T
South Texas Siren - large form (***Siren* sp. 1**) - wet or sometimes wet areas, such as arroyos, canals, ditches, or even shallow depressions; aestivates in the ground during dry periods, but does require some moisture to remain; southern Texas south of Balcones Escarpment; breeds February-June		T
White-lipped Frog (***Leptodactylus labialis***) - grasslands, cultivated fields, roadside ditches, and a wide variety of other habitats; often hides under rocks or in burrows under clumps of grass; species requirements incompatible with widespread habitat alteration and pesticide use in south Texas		T
***** BIRDS *****		
American Peregrine Falcon (***Falco peregrinus anatum***) - potential migrant; nests in west Texas	DL	E
Arctic Peregrine Falcon (***Falco peregrinus tundrius***) - due to similar field characteristics, treat all Peregrine Falcons as federal listed Endangered; potential migrant	DL	T
Audubon's Oriole (***Icterus graduacauda audubonii***) - scrub, mesquite; nests in dense trees, or thickets, usually along water courses		
Brown Pelican (***Pelecanus occidentalis***) - largely coastal and near shore areas, where it roosts on islands and spoil banks	LE	E
Brownsville Common Yellowthroat (***Geothlypis trichas insperata***) - tall grasses and bushes near ponds, marshes, and swamps; breeding April to July		
Cactus Ferruginous Pygmy-owl (***Glaucidium brasilianum cactorum***) - riparian trees, brush, palm, and mesquite thickets; during day also roosts in small caves and recesses on slopes of low hills; breeding April to June		T
Common Black Hawk (***Buteogallus anthracinus***) - cottonwood-lined rivers and streams; willow tree groves on the lower Rio Grande floodplain; formerly bred in south Texas		T
Northern Aplomado Falcon (***Falco femoralis septentrionalis***) - open country, especially savanna and open woodland, and sometimes in very barren areas; grassy plains and valleys with scattered mesquite, yucca, and cactus; nests in old stick nests of other bird species	LE	E
Northern Beardless-tyrannulet (***Camptostoma imberbe***) - mesquite woodlands; near Rio Grande frequents cottonwood, willow, elm, and great leadtree; breeding April to July		T
Piping Plover (***Charadrius melodus***) – wintering migrant along the Texas Gulf Coast; beaches and bayside mud or salt flats	LT	T
Reddish Egret (***Egretta rufescens***) – resident of the Texas Gulf Coast; brackish marshes and shallow salt ponds and tidal flats; nests on ground or in trees or bushes, on dry coastal islands in brushy thickets of yucca and prickly pear		T
Rose-throated Becard (***Pachyramphus aglaiae***) - riparian trees, woodlands, open forest, scrub, and mangroves; breeding April to July		T

	Federal Status	State Status
√ **Sennett's Hooded Oriole** (***Icterus cucullatus sennetti***) - often builds nests in and of Spanish moss (*Tillandsia unioides*); feeds on invertebrates, fruit, and nectar; breeding March to August		
Snowy Plover (***Charadrius alexandrinus***) - wintering migrant along the Texas Gulf Coast beaches and bayside mud or salt flats		
Sooty Tern (***Sterna fuscata***) – predominately "on the wing"; does not dive, but snatches small fish and squid with bill as it flies or hovers over water; breeding April-July		T
Texas Botteri's Sparrow (***Aimophila botterii texana***) - grassland and short-grass plains with scattered bushes or shrubs, sagebrush, mesquite, or yucca; nests on ground of low clump of grasses		T
√ **Tropical Parula** (***Parula pitiayuma***) – dense or open woods, undergrowth, brush, and trees along edges of rivers and resacas; breeding April to July		T
White-faced Ibis (***Plegadis chihi***) – prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats		T
White-tailed Hawk (***Buteo albicaudatus***) - near coast it is found on prairies, cordgrass flats, and scrub-live oak; further inland on prairies, mesquite and oak savannas, and mixed savanna-chaparral; breeding March to May		T
Wood Stork (***Mycteria americana***) – forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960		T
Zone-tailed Hawk (***Buteo albonotatus***) - rough, deep, rocky canyons and streamsides in semiarid mesa, hill, and mountain terrain; breeding March to July		T
***** BIRDS-RELATED *****		
√ **Colonial waterbird nesting areas** - many rookeries active annually		
√ **Migratory songbird fallout areas** - oak mottes and other woods/thickets provide foraging/roosting sites for neotropical migratory songbirds		
***** FISHES *****		
River Goby (***Awaous tajasica***) - clear water with slow to moderate current, sandy or hard bottom, and little or no vegetation; also enters brackish and ocean waters		T
Blackfin Goby (***Gobionellus atripinnis***) - brackish and freshwater coastal streams		T
Opossum Pipefish (***Microphis brachyurus***) - brooding adults found in fresh or low salinity waters and young move or are carried into more saline waters after birth		T
***** INSECTS *****		
Smyth's Tiger Beetle (***Cicindela chlorocephala smythi***) - most tiger beetles are active, usually brightly colored, and found in open, sunny areas; adult tiger beetles are predaceous and feed on a variety of small insects; larvae of tiger beetles are also predaceous and live in vertical burrows in soil of dry paths, fields, or sandy beaches		
***** MAMMALS *****		
Coues' Rice Rat (***Oryzomys couesi***) – cattail-bulrush marsh with shallower zone of aquatic grasses near the shoreline; shade trees around the shoreline are important features; prefers salt and freshwater, as well as grassy areas near water; breeds April-August		T

	Federal Status	State Status
Jaguar (*Panthera onca*) (extirpated) – dense chaparral; no reliable TX sightings since 1952	LE	E
Jaguarundi (*Felis yaguarondi*) - thick brushlands, near water favored; six month gestation, young born twice per year in March and August	LE	E
Ocelot (*Felis pardalis*) - dense chaparral thickets; mesquite-thorn scrub and live oak mottes; avoids open areas; breeds and raises young June-November	LE	E
Plains Spotted Skunk (*Spilogale putorius interrupta*) - catholic; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie		
Southern Yellow Bat (*Lasiurus ega*) – associated with trees, such as palm trees (*Sabal mexicana*) in Brownsville, which provide them with daytime roosts; insectivorous; breeding in late winter		T
West Indian Manatee (*Trichechus manatus*) - Gulf and bay system; opportunistic, aquatic herbivore	LE	E
White-nosed Coati (*Nasua narica*) – woodlands, riparian corridors and canyons; most individuals in Texas probably transients from Mexico; diurnal and crepuscular; very sociable; forages on ground & in trees; omnivorous; may be susceptible to hunting, trapping, & pet trade		T
Yuma Myotis Bat (*Myotis yumanensis*) - desert regions; most commonly found in lowland habitats near open water, where forages; roosts in caves, abandoned mine runnels, and buildings; season of parts is May to early July; usually only one young born to each female		
***** MOLLUSKS *****		
Texas Hornshell (*Popenaias popei*) – Rio Grande drainage from the Pecos River to the Falcon Breaks		
***** REPTILES *****		
Atlantic Hawksbill Sea Turtle *(Eretmochelys imbricata)* - Gulf and bay system	LE	E
Black Striped Snake (*Coniophanes imperialis*) - extreme south Texas; semi-arid coastal plain, warm, moist micro-habitats and sandy soils; proficient burrower; eggs laid April-June		T
Green Sea Turtle *(Chelonia mydas)* – Gulf and bay system	LT	T
Indigo Snake (*Drymarchon corais*) – thornbush-chaparral woodlands of south Texas, in particular dense riparian corridors; can do well in suburban and irrigated croplands if not molested or indirectly poisoned; requires moist microhabitats, such as rodent burrows, for shelter		T
Keeled Earless Lizard (*Holbrookia propinqua*) - coastal dunes, barrier islands, and other sandy areas; eats insects and likely other small invertebrates; lays clutches of 2-7 eggs March-September (most May-August) in soil/underground		
Kemp's Ridley Sea Turtle *(Lepidochelys kempii)* - Gulf and bay system	LE	E
Leatherback Sea Turtle *(Dermochelys coriacea)* - Gulf and bay system	LE	E
Loggerhead Sea Turtle *(Caretta caretta)* - Gulf and bay system	LT	T
Northern Cat-eyed Snake (*Leptodeira septentrionalis*) - Gulf Coastal Plain south of the Nueces River; thorn brush woodland; dense thickets bordering ponds and streams; semi-arboreal; nocturnal		T
Speckled Racer (*Drymobius margaritiferus*) - extreme south Texas; dense thickets near water, Texas palm groves, riparian woodlands; often in areas with much vegetation litter on ground; breeds April-August		T

	Federal Status	State Status
Texas Horned Lizard (***Phrynosoma cornutum***) - open arid or semi-arid regions with sparse vegetation; grass, cactus, scattered brush or scrubby trees; burrows into soil, uses rodent burrows, or hides under surface cover		T
Texas Tortoise (***Gopherus berlandieri***) - open scrub woods, arid brush, lomas, grass-cactus association; open brush with grass understory preferred; uses shallow depressions at base of bush or cactus or underground burrow or hides under surface cover		T

*** VASCULAR PLANTS ***

Bailey's ballmoss (***Tillandsia baileyi***) – epiphytic on various trees and shrubs; flowering February-May		
Lila de los Llanos (***Echeandia chandleri***) - grasslands and openings in subtropical woodlands and brush on clay soils; common in windblown saline clay on lomas near mouth of Rio Grande; flowering (May?) September-December; fruiting October-December		
Mexican mud-plantain (***Heteranthera mexicana***) - aquatic; ditches and ponds; flowering June-August		
Plains gumweed (***Grindelia oolepis***) – endemic; prairies and grasslands on black clay soils of the Gulf Coastal Bend; may occur along railroad rights-of-way and in urban areas; flowering May-December		
Runyon's cory cactus (***Coryphantha macromeris* var. *runyonii***) - endemic; low hills and flats on gravelly soils in Tamaulipan shrub communities along the Rio Grande		
Runyon's water willow (***Justicia runyonii***) - calcareous silt loam, silty clay, or clay in openings in subtropical woodlands on active or former floodplains; flowering (July-) September-November		
South Texas ambrosia (***Ambrosia cheiranthifolia***) - open prairies and various shrublands on deep clay soils; flowering July-November	LE	E
St. Joseph's staff (***Manfreda longiflora***) - endemic; various soils (clays and loams with various concentrations of salt, caliche, sand, and gravel) in openings or amongst shrubs in thorny shrublands; on Catahoula and Frio formations, and also on Rio Grande floodplain alluvial deposits; flowering in September		
Star cactus (***Astrophytum asterias***) – gravelly saline clays of loams over the Catahoula and Frio formations, on gentle slopes and flats in grasslands or shrublands; flowering in May	LE	E
Texas ayenia (***Ayenia limitaris***) – woodlands on alluvial deposits on floodplains and terraces along the Rio Grande; flowering throughout the year with sufficient rainfall	LE	E
Vasey's adelia (***Adelia vaseyi***) – subtropical woodlands in Lower Rio Grande Valley; flowering January-June		

LE,LT - Federally Listed Endangered/Threatened
PE,PT - Federally Proposed Endangered/Threatened
E/SA,T/SA - Federally Endangered/Threatened by Similarity of Appearance
C1 - Federal Candidate, Category 1; information supports proposing to list as endangered/threatened
DL,PDL - Federally Delisted/Proposed Delisted
E,T - State Endangered/Threatened
"blank" - Rare, but with no regulatory listing status

COUNTY LISTS OF TEXAS' SPECIAL SPECIES

Includes: * Vertebrates, Invertebrates, and Vascular Plants on Texas Biological and Conservation Data System's (TXBCD) special species lists--e.g., species/subspecies/variety has federal listed, proposed, or candidate status, state listed status, or species/subspecies/variety carries global rarity rank placing it on special species lists
* Colonial Waterbird Nesting Areas and Migratory Songbird Fallout Areas--only for coastal counties

Excludes: * Natural Plant Communities--e.g., Little Bluestem-Indiangrass Series (native prairie remnant), Water Oak-Willow Oak Series (bottomland hardwood community), Saltgrass-Cordgrass Series (salt or brackish marsh), Sphagnum-Beakrush Series (seepage bog)
* Other Significant Features--e.g., non-coastal bird rookeries and migratory bird information, bat roosts, bat caves, invertebrate caves, prairie dog towns

Revised Dates: Each county's revised date reflects the last date any changes or revisions were made for that county, to reflect current listing statuses and taxonomy.

Parameters: Species appearing on these lists do not all share the same probability of occurrence within a county. Some species are migrants or wintering residents only. Additionally, a few species may be historic or considered extirpated within a county. Species considered extirpated within the state are so flagged on each list, and include: Margay, Gray Wolf, Red Wolf, Ivory-billed Woodpecker, Bachman's Warbler, San Marcos Gambusia, Blotched Gambusia, Rio Grande Silvery Minnow, Bluntnose Shiner, and auriculate false foxglove.

Background and Utility: * The TXBCD, established in 1983, is the state's most comprehensive source of information on rare, threatened, and endangered plants and animals, exemplary natural communities, and other significant features. The TXBCD is constantly updated, providing current information on the statewide status and locations of these unique "elements" of natural diversity, which are special species, natural communities, and other significant features.

* The TXBCD gathers biological information from museum and herbarium collection records, publications, experts in the scientific community, organizations, individuals, and on-site field surveys conducted by staff on public lands or on private lands with written permission. Staff botanists, zoologists, and ecologists perform field surveys to locate and verify specific occurrences of biological elements of the highest priority and collect accurate information on their condition, quality, and management needs.

Revised: 00-03-23

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* The TXBCD can be used to help evaluate the environmental impact of routing and siting options for development projects. It also assists in impact assessment, environmental review, and permit review. Approximately 300 project reviews of these types are performed each month.

To Request Project Review: * A site-specific review can provide information on special species, natural communities, and other significant features occurring or potentially occurring in the general vicinity of a project. Species information, such as known habitats and breeding/flowering periods, are generally noted in responses.

* For site-specific project review contact the TXBCD's Environmental Review Coordinator at 512/912-7058 (fax), 3000 South IH-35, Suite 100, Austin, Texas 78704 (mail), or 512/912-7021 (phone) and provide the following:
  >> description of project and its scope,
  >> physical description of natural features of site,
  >> current condition and/or past site use, and
  >> a map depicting the project's precise geographic location (please include copy from USGS 7.5' topographic quadrangle with project boundaries clearly noted, plus quad and county name; in lieu of topo, a county or other precise map will suffice if detailed directions allow us to locate the site on our topos).

* Please allow 4-8 weeks for review, longer for large projects.

Disclaimer: Given the small proportion of public versus private land in Texas, the TXBCD includes less than a representative inventory of rare resources in many areas of the state; although, it is based on the best data available to the state regarding rare species. Thus, these data cannot provide a definite statement as to the presence, absence, or condition of special species, natural communities, or other significant features in any area, nor can it substitute for on-site evaluation by qualified biologists. It is intended to assist the user in avoiding harm to species that may occur.

Citation: Please use the following citation to credit the TXBCD as the source for this county level information.

> Texas Biological and Conservation Data System. Texas Parks and Wildlife Department, Wildlife Diversity Program. County Lists of Texas' Special Species. (county name(s) and revised date(s)).